The Virtual Institute of Microbial Stress and Survival

Rapid Deduction of Stress Response Pathways in Metal/Radionuclide Reducing Bacteria

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Managing the Genomics:GTL Project at LBNL

Project Management Overview

The effective management of the Genomics:GTL systems biology project at Lawrence Berkeley National Laboratory (LBNL) is essential to the success of the project. The comprehensive management plan for the project includes milestone planning and project integration, a plan for communicating and collaborating with the project stakeholders, financial management and website updates. In addition, the management plan incorporates reviews by committees, including a monthly Executive Committee review comprised of LBNL leadership, an annual Scientific Advisory Committee review, a biannual Technical Advisory Panel review to ensure that the project's technical development is aligned with related DOE efforts, and a monthly Steering Committee conference call where the project leaders discuss the project's progress and status.

A key responsibility in the project management process is troubleshooting problems related to the scientific and financial management of the project. There is a delicate balance between having adequate resources to achieve the scientific objectives of the project and working within the funding levels of the project. If an area is falling behind on achieving their scientific milestones, the project manager must work closely with the researchers to resolve problems as efficiently and effectively as possible.

Communication and Collaboration

The Genomics:GTL project at LBNL is a collaborative effort between seven institutions, thirteen researchers and their associated laboratories. The project's communications tools consist of a variety of media, including a project website, monthly group meetings, conference calls, an annual retreat, workshops at conferences, and monthly progress reports.

The monthly group meetings include a presentation from one of the Core Research groups, and it is attended by the local, northern California GTL project team members. There are a several conference calls that are held on a regular basis, including a monthly Steering Committee meeting in which all of the researchers participate, a monthly BioFiles conference call in which a representative from each laboratory discusses data generation, uploads and handling, and a quarterly conference call with DOE. The LBNL project has an annual retreat in which the researchers present data and findings related to their area of focus and other laboratory team members (Computer Science Engineers, Microbiologists, Database Managers, Graduate Students, Post Docs, etc.) present posters in a poster forum. The annual retreat has proven to be very successful in building working relationships among the dispersed group.

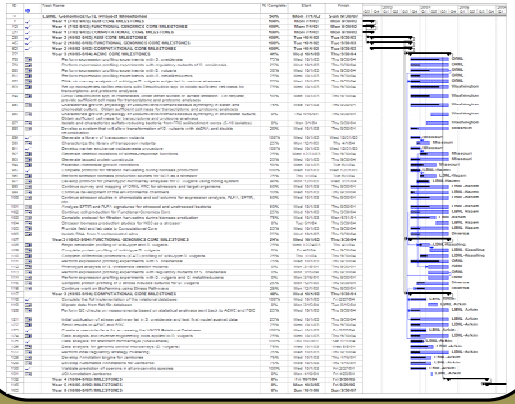
The LBNL Genomics:GTL project will be participating in several workshops at international conferences in 2004, including:

Society for Industrial Microbiology (SIM) Annual Meeting
Workshop: Stress in Metal-Reducing Bacteria: Ecology, Functional Genomics, Bioinformatics
July 25-29 in Anaheim, CA http://www.simhq.org/html/meetings.html

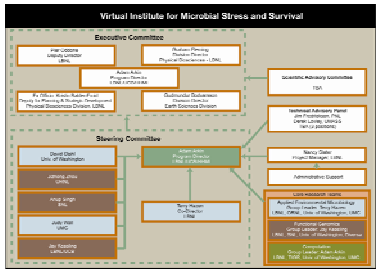
10th International Symposium on Microbial Ecology (ISME-10)
ISME-10 Roundtable: Rapid Deduction of Stress Response Pathways in Metal-Reducing Bacteria: Ecology, Functional Genomics, Bioinformatics
August 22-27 in Cancun, Mexico http://www.kenes.com/isme/index.html

Milestone Planning and Project Integration

A detailed list of project deliverables and milestones is updated by the PIs at the beginning of each fiscal year. The process of updating and reviewing milestones ensures that the goals of each PI are aligned with the overall goals of the project. These milestones are the basis for an integrated project schedule, which is managed using Microsoft® Project. The project schedule is updated monthly, and progress is reported through progress reports and teleconferences with the PIs. The updated project schedule is posted to the project website, so that all of the collaborators have access to the most recent status of the project.
The project is divided into three separate Core groups, and the integration plan for the project assures that the Core groups work together toward the objectives of the project. The Core Research group leaders are responsible for ensuring smooth operation of their section of the project as well as cooperation with the other groups. For example, the Applied Environmental Microbiology leader is responsible for ensuring that cell culture protocols are acceptable to the Functional Genomics Core, who will ultimately use the cell cultures for experiments. The Functional Genomics Core leader is responsible for ensuring quality control for data production and timely data uploads into the database. The Computational Core leader is responsible for ensuring that data entry, querying, and curation interfaces serve the needs of the other groups, and that the models are useable to biologists outside of the modeling group. The success of each group is interdependent on a well-integrated project team.



Project Organization



Financial Management

Each of the researchers provides input into the annual spend plan for the project. The finances of the project are tracked on a continuous basis, and the researchers receive monthly reports showing actual costs verses the spend plan. The finances of the project are maintained using software packages at LBNL as well as spreadsheets and charts. These tools allow the Project Manager to identify spending trends, so that appropriate can be taken to keep the project aligned with the annual spend plan. The Executive Committee reviews the project financial reports monthly.

LBNL Genomics:GTL Project Website

The Genomics:GTL project at LBNL is the inaugural project for the Virtual Institute of Microbial Stress and Survival (VIMSS), and details regarding the project are located on the world wide web at http://vimss.lbl.gov. This website serves as a tool for communicating the status of the project and access to important tools, including:

- An overview of the GTL project at Berkeley and links to the key personnel working on the project
- A link to Comparative Genomics Tools such as the Comparative Genome Database, the Genome Browser, and Operon and Regulon Prediction tools (http://escalante.lbl.gov/)
- Link to the BioFiles repository of project data
- Discussion board for project team members to interact and post protocols, questions and solutions
- Job board with available GTL-related positions
- Calendar of upcoming meetings and events

http://vimss.lbl.gov